

Application No. 10/790,532  
Amendment dated April 25, 2007  
Reply to Office Action of January 25, 2006

Docket No.: HO-P02877US0

## REMARKS

### DRAFT TALKING POINTS FOR INTERVIEW OF APRIL 24, 2007

1. Product by process (Office Action page 2): Applicants acknowledge that Claim 13 is a product-by-process claim and that, therefore, its patentability depends solely on the patentability of the product, not the method steps.

2. Claims 12 and 19, 112, first paragraph, written description (Office Action page 2): Applicants have canceled claims 12 and 19 solely in order to advance prosecution of this case to allowance, and expressly without prejudice, and not in acquiescence to the 112 rejection. Applicants retain all rights to reintroduce the canceled subject matter in this or a related application.

3. Claims 2-7, 10, 12-13, 15, 16, 18 and 24, 112, first paragraph, indefiniteness (Office Action pages 2-3): Applicants acknowledge the Examiner's rejections and wish to discuss how these claims can be properly amended to clearly state that the claimed modifications are improvements over the art.

Applicants have amended claim 2 above (but not the other claims, yet) in order to facilitate this discussion.

Claims 18 and 24 have been amended to correct a misspelled word. Applicants thank the Examiner for pointing this out.

4. Claims 20, 21, 23 and 24, 102(b) (Sweeney) (Office Action pages 3-5): The Examiner has rejected these claims under anticipation (Section 102(b)) over Sweeney.

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Anticipation requires that each and every claim limitation be shown in a single prior art reference.

Claims 20, 21, 23 and 24 each have at least one limitation that is clearly not shown in Sweeney (indeed, as discussed below, the opposite is shown in Sweeney): In the presently claimed invention, the “recessed non-tab surface [is] shaped to be capable of coming into substantially continuous flush contact with the inner surface of said securing surface,” “being capable of forming a substantially continuous flush contact between the non-tab surface of the tab end of the member and the inner surface of said securing surface when said member is joined to said post.”

As can clearly be seen in, for example, figures 2 and 3, and page 2, line 6, of Sweeney (see attached copy with hand-written notations), the recessed non-tab surface of Sweeney is not shaped to be capable of coming into “substantially continuous flush contact with the inner surface of said securing surface,” and, therefore, the joint connection of Sweeney is not “capable of forming a substantially continuous flush contact between the non-tab surface of the tab end of the member and the inner surface of said securing surface when said member is joined to said post.” In fact, as described on page 2, line 6, and as clearly shown in figures 2 and 3 of Sweeney, only the “shoulder” of the non-tab surface of Sweeney makes contact with the inner surface of the securing surface – leading to clear gaps or crevices between the remainder of the non-tab surface of Sweeney and the inner surface of the securing surface when the member is engaged.

Sweeney clearly lacks the claim limitation of the non-tab surface of the engaged member being in “substantially continuous flush contact with the inner surface of said securing surface.” Sweeney is, therefore, not anticipatory prior art.

Should the Examiner wish to maintain this rejection, it is respectfully requested that the Examiner show exactly where in Sweeney the claimed “substantially continuous flush contact” between the non-tab portion of the member and the inner wall of the securing surface is found. As figures 2 and 3, and page 2, line 6, of Sweeney clearly show, instead of the claimed “substantially continuous flush contact” between the non-tab portion of the

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member and the inner surface of the securing surface, there are clearly-shown crevices – not substantially continuously flush contact.

5. Claim 22, 103(a) (Sweeney in view of Shaw) (Office Action pages 5-6): The Examiner has rejected claim 22 for obviousness (Section 103(a)) over Sweeney in view of Shaw. Obviousness requires a showing that a combination of art discloses each and every claim limitation.

As discussed above, Sweeney does not disclose or suggest at least the limitation of claim 22 that the “recessed non-tab surface [is] shaped to be capable of coming into substantially continuous flush contact with the inner surface of said securing surface,” “being capable of forming a substantially continuous flush contact between the non-tab surface of the tab end of the member and the inner surface of said securing surface when said member is joined to said post.”

Shaw does not provide, or even suggest, this missing limitation. Should the Examiner maintain this obviousness rejection, it is respectfully requested that the Examiner show how Shaw supplies this missing claim limitation.

6. Claims 1-7, 10, and 12-19, 103(a) (admitted prior art in view of Querengesser and Sweeney) (Office Action pages 6-8): The Examiner has rejected these for obviousness (Section 103(a)) over applicant’s admitted prior art in view of Querengesser and Sweeney. Obviousness requires a showing that a combination of art discloses each and every claim limitation.

As discussed above, Sweeney does not disclose or suggest at least the limitation of claim each claim that the “recessed non-tab surface [is] shaped to be capable of coming into substantially continuous flush contact with the inner surface of said securing surface,” “being capable of forming a substantially continuous flush contact between the non-tab surface of

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the tab end of the member and the inner surface of said securing surface when said member is joined to said post."

Neither Querengesser, or applicant's admitted prior art (presumably the preamble on the "Jepson-type" claims), supply this missing claim limitation. Indeed, in Querengesser, the tabbed member does not even touch the inner surface of the securing surface (in Querengesser, the member connects only to one surface (what might correspond to the stabilizing surface of the claimed invention)).

Therefore, the Examiner has not shown how applicant's admitted prior art, Sweeney and Querengesser supply the claim limitation that the "recessed non-tab surface [is] shaped to be capable of coming into substantially continuous flush contact with the inner surface of said securing surface," "being capable of forming a substantially continuous flush contact between the non-tab surface of the tab end of the member and the inner surface of said securing surface when said member is joined to said post."

The claimed invention is, therefore, not obvious over applicant's admitted prior art, Sweeney and Querengesser.

7. Applicants therefore respectfully assert that the claims, as amended, are allowable. Applicants thank the Examiner for taking the time to have this interview.

\* \* \* \*

Therefore, applicants submit that all of the pending obviousness claims are traversed and, therefore, respectfully request that the amended claims be allowed.

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Applicant believes no other fee is due with this response. However, if a fee is due, please also charge our Deposit Account No. 06-2375, under Order No. HO-P02877US0.

Dated: April 25, 2007

Respectfully submitted,

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with NOTES

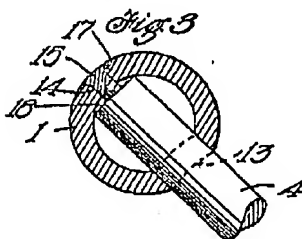
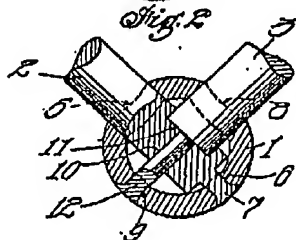
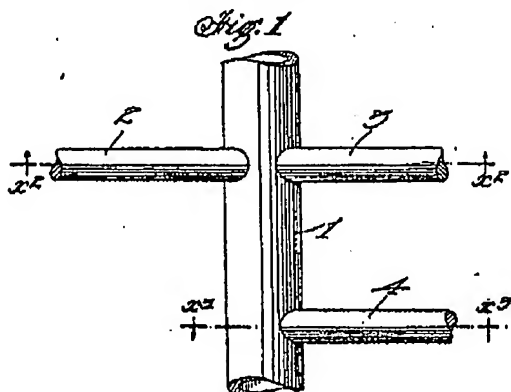
No. 823,451.

PATENTED JUNE 12, 1906.

W. W. SWEENEY & F. A. SYLVA,

JOINT.

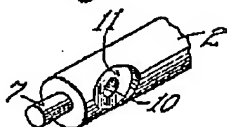
APPLICATION FILED FEB. 9, 1905.



note  
crevices in  
Figs 2 & 3 --

NOT  
"substantially  
continuous flush  
contact"

Fig. 4



Witnesses

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George T. Hackley

Inventors

William W. Sweeney

Frank H. Sylva

by Thomas H. Sweeney, atty.

# UNITED STATES PATENT OFFICE.

WILLIAM W. SWEENEY AND FRANK A. SYLVA, OF LOS ANGELES, CALIFORNIA, ASSIGNORS, BY DIRECT AND MESNE ASSIGNMENTS, TO PACIFIC SURGICAL MANUFACTURING COMPANY, OF LOS ANGELES, CALIFORNIA, A CORPORATION OF CALIFORNIA.

## JOINT.

No. 828,451.

Specification of Letters Patent.

Patented June 12, 1906.

Application filed February 9, 1905. Serial No. 244,865.

*To all whom it may concern:*

Be it known that we, WILLIAM W. SWEENEY and FRANK A. SYLVA, both citizens of the United States, residing at Los Angeles, in the county of Los Angeles, State of California, have invented certain new and useful Improvements in Joints, of which the following is a specification.

This invention relates to joints which are particularly adapted for table and other furniture constructions where a plurality of transversely-extending members are to be secured together.

The class of furniture to which it is especially applicable is that wherein the attached parts are metallic—for example, in operating-tables used in hospital service.

An object of this invention is to provide a joint for this and similar purposes which will have great strength and durability.

A further object of this invention is to provide a joint of this character which will present a good appearance and which will be free from exposed crevices, which not only mar the appearance, but which serve to accumulate dust and germs.

The usual practice in attaching metallic parts of this nature is to reduce or turn down the end of the smaller member, correspondingly bore the larger member from side to side, and pass the reduced part of the smaller member through said bore from side to side of the larger member, upsetting or riveting on the end, so as to clamp or grip the larger member between the upset and shoulder on the smaller member. This construction has the disadvantage of unduly weakening the smaller member and rendering it liable to break at the point where it enters the larger member and also of presenting crevices or notches between the shoulder of the smaller member and the wall of the larger member.

The present invention provides a construction which preserves the full diameter and strength of the smaller member where it enters the larger member and also avoids any crevices at such point of entrance.

The accompanying drawings illustrate the invention.

Figure 1 is an elevation of the members joined together. Fig. 2 is a transverse section on the line X-X in Fig. 1, showing a

joint of two transversely-extending members with the main member preferably perpendicular to both of them. Fig. 3 is a section on the line X-X in Fig. 1, showing the joint of one member with the main member extending perpendicular thereto. Fig. 4 is a perspective of the joint end of one of the attached members.

1 designates the main or supporting member, which may, for example, be the leg of a table or similar article of furniture, such as an operating-table for hospital service. Said member 1 is tubular and its walls are bored to receive and engage the attached members 2, 3, and 4, which are of smaller diameter than the member 1. The members 2 and 3 are assumed to enter the member 1 perpendicular to one another and to the said member 1. The leg member 1 has diametrically opposite holes or bores 5 and 6, the hole 5 being of a size to receive and fit the body of member 2 and the hole 6 of a size to fit the stud, pin, or reduced end 7, projecting from or formed on the end of the member 2. The adjacent end of the member 2 abuts against the inner wall of the tubular member 1. The said member 1 is also provided with bores or openings 8 and 9, diametrically opposed to one another and in a line transverse or perpendicular to the axis of the member 2, and said member 2 is bored or perforated, as at 10, and counterbored or recessed, as at 11, in line with the centers of the perforations 8 and 9. The member 3 traverses and fits within the perforation 8 and enters and fits within the recess 11. A stud-pin or reduced end 12, projecting from and formed on the end of said member 3, traverses the perforation 10 and the hole 9, passing through to the outside of the member 1. The stud projections, pins, or reduced ends 7 and 12 are upset or riveted over at the outside of the member 1, the latter being preferably countersunk, so as to give a smooth and flush surface. When the parts are so arranged, each will interlock with the other and give a firm rigid fastening with a maximum of strength and with no exposed crevices.

In case only one transverse member is to be attached—for example, the member 4, (see Figs. 1 and 3)—it is secured in a manner similar to the member shown in Figs. 1 and 2,

823,451

The  
"Shoulder"  
only -  
not "substantially"  
continuous  
flush  
contact!

the tubular member 1 being bored at 13 and 14 with larger and small openings to receive and fit correspondingly the member 4 and the pin projection or reduced end 15 on the end thereof, the latter being riveted or upset into a countersink 17 to hold the shoulder 18 at the inner end of the member 4 tightly against the inner wall of the tubular member 1, giving a rigid connection.

What we claim is—

1. A tube, the shell of which has two diametrically opposite perforations, one perforation being larger than the other, a lateral member having a stud projecting from its end and forming a shoulder, the main portion of the lateral member projecting through the large perforation of the tube and closely fitting in the large perforation, opposite edges of the shoulder of the lateral member resting against the inside wall of the shell at points opposite the axis of the small perforation, the stud fitting closely in the small perforation and being headed to retain the lateral member in place.

2. The combination with a tubular member of two attached members of smaller diameter than the tubular member and arranged transversely to one another and to said tubular member, the said tubular member having 30 openings receiving and fitting said smaller

members and having small openings diametrically opposed to the aforesaid openings, said smaller members having reduced portions at their ends to fit in said smaller openings, one of said members having a transverse perforation to receive the reduced portion of the other member.

3. The combination with a tubular member of two attached members of smaller diameter than the tubular member and arranged transversely to one another and to said tubular member, the said tubular member having openings receiving and fitting said smaller members, and having small openings diametrically opposed to the aforesaid openings, said smaller members having reduced portions at their ends to fit in said smaller openings, one of said members having a transverse perforation to receive the reduced portion of the other member, and a recess to receive the end of the body of the other member.

In testimony whereof we have hereunto set our hands, at Los Angeles, California, this 1st day of February, 1905.

WILLIAM W. SWEENEY.  
FRANK A. SYLVA.

In presence of—

GEORGE T. HACKLEY,  
EARL A. R. LYNN.



*With Notes*

Feb. 13, 1962

R. E. QUERENGESSER  
FENCE CONSTRUCTION

3,021,116

Filed May 11, 1959

3 Sheets-Sheet 1

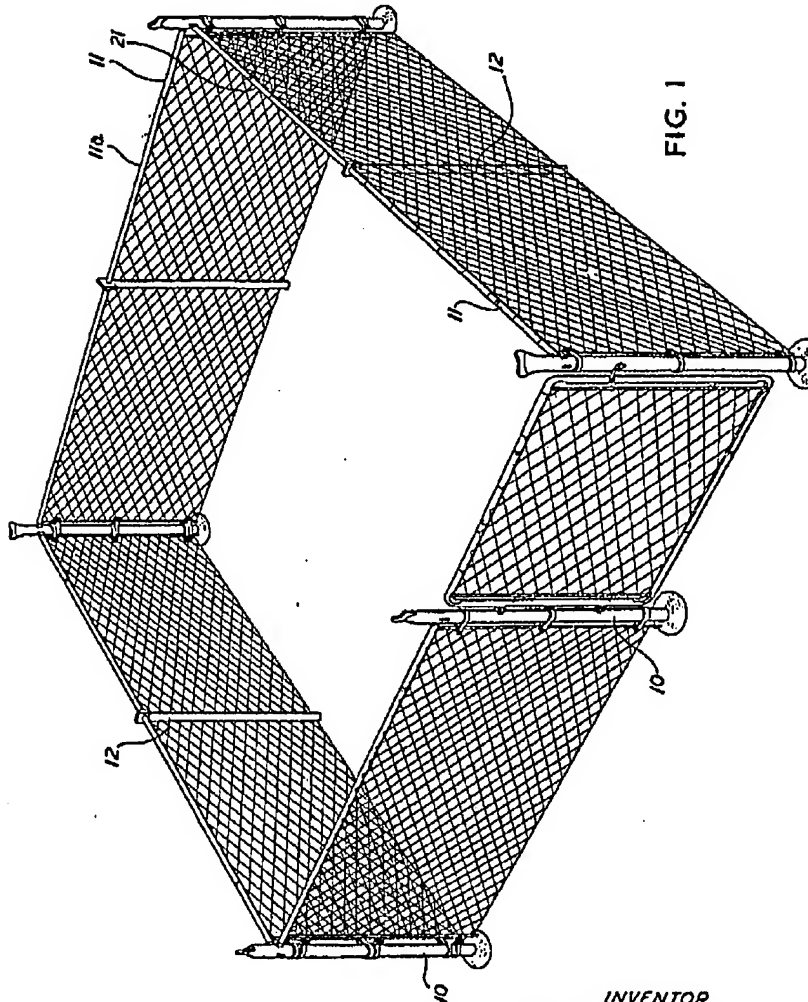


FIG. 1

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ATTORNEYS

Feb. 13, 1962

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FENCE CONSTRUCTION

3,021,116

Filed May 11, 1959

3 Sheets-Sheet 2

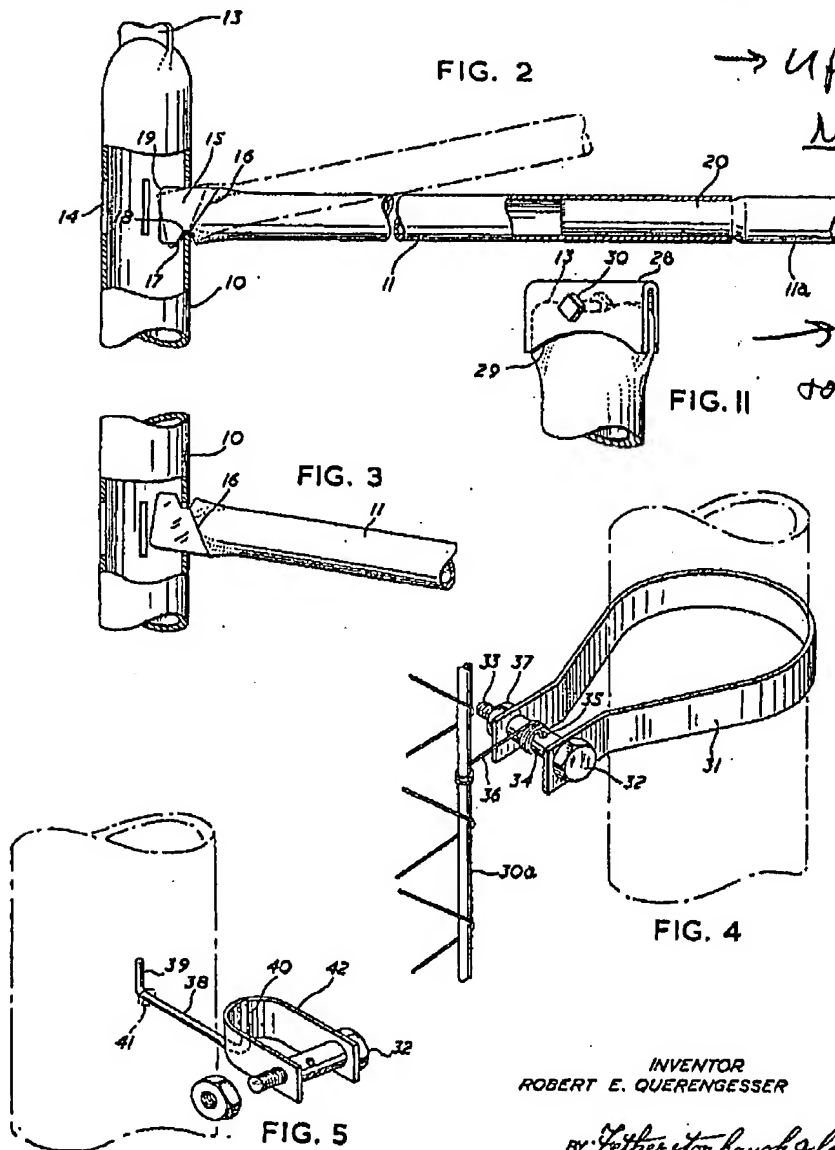


FIG. 2

→ UP AND DOWN,  
NOT "rotation"

FIG. 11

→ only attaches  
to outer "stabilizing"Surface,  
not through opening  
and flush with inner  
Side of opposite  
(securing) side.

FIG. 4

FIG. 5

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Feb. 13, 1962

R. E. QUERENGESSER  
FENCE CONSTRUCTION

3,021,116

Filed May 11, 1959

3 Sheets-Sheet 3

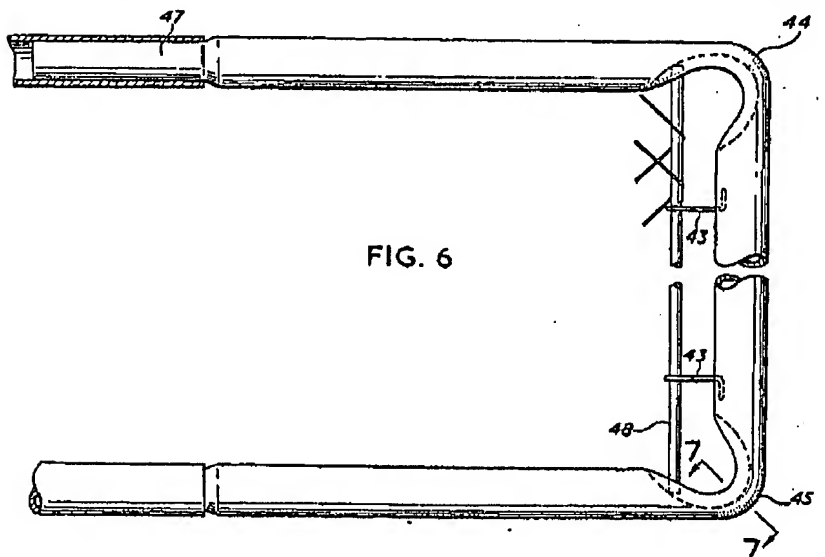


FIG. 6



FIG. 7

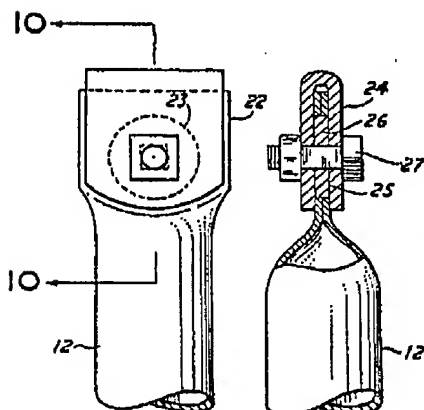


FIG. 9

FIG. 10

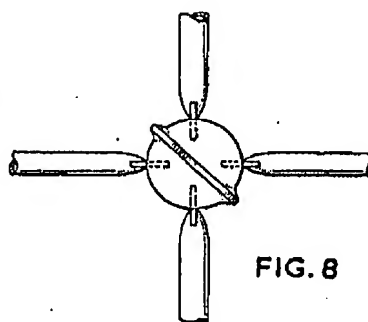


FIG. 8

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## United States Patent Office

3,021,116

Patented Feb. 13, 1962

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3,021,116

## FENCE CONSTRUCTION

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Richmond Hill, Ontario, Canada  
Filed May 11, 1959, Ser. No. 812,544  
4 Claims. (Cl. 256-72)

This invention relates to fence structure and more particularly structure embodying a framework composed of tubular structural elements.

For a number of years fence structure embodying tubular structural elements has been a generally accepted form and which includes tubular terminal posts, tubular transverse bars connecting therewith and intermediate line posts adapted to engage the transverse tubular bars and support them intermediate the terminal posts. On this framework a mesh or other wire fabric, mesh or the like, is stretched and secured, usually requiring special stretching mechanism. In particular, the tubular posts must be capped with special capping members which may be united in a pressed fit internally or externally of the post or capping members may be employed secured by grub screws. The intermediate line posts likewise are usually provided with a capping member having a looped superstructure through which the horizontal tubular elements are passed, whereas the horizontal tubular members are usually secured together in desired lengths by metal sleeves fastened thereto and are connected to the terminal or corner posts by means of special brackets which are applied to the posts and connected to such elements by means of bolts and the like. This requires a substantial number of parts which complicate the work of erection of the fence structure while adding to cost substantially and a more cumbersome looking structure results than that which might be desired.

The present invention avoids these general disadvantages in prior structures by providing a plurality of simple structural tubular elements which may be connected readily in a fence structure which does not require the addition of separate capping elements, guiding elements and the like which quickly produces a fence of sturdy, simple character and of particularly neat appearance.

The invention is generally identified with tubular structural elements having a portion thereof at and adjacent one end, flattened to close said end and form thereon an exteriorly projecting integral flange element disposed to have its longitudinal axis co-axial to or parallel to the longitudinal axis of such structural element, said flange being receivable in a complementary recess of a co-operating element. The terminal or corner posts of the fence structure are formed with slots for receiving interconnecting transverse, terminal elements of this general character, the flanges of which enter said slots and are locked in a simple manipulation, such transverse elements being designed telescopically to engage tubular stringers to provide for desired length of extent of rail thus formed whereas line posts of similar construction employ an orificed flange through which the connecting structural members are passed for connection and support. The fencing fabric is connected and stretched on the structure in a particularly simple manner by elements which form part of an anchoring means therefor. The invention also embodies novel gate structure including U-shaped terminal elements adapted to be connected telescopically and including inversely upset corners in each U-shaped element forming chapels on the inside of the corners to constitute sockets for terminal rods securing the fence fabric.

The invention will be clearly understood by reference to the following detailed specification taken in conjunction with the accompanying drawings.

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In the drawings:

FIGURE 1 is a perspective view of an erected fence structure made according to the present invention.

FIGURE 2 is an enlarged partly sectional elevation of the top portion of a corner post and illustrating the mounting and securement of a connecting structural element and the adjustability of the latter (by way of dotted line) when extending to a post disposed at a higher elevation.

FIGURE 3 is an enlarged fragmentary partly sectional view of a corner post and its engagement with a connecting member when the latter extends to a post disposed at a lower elevation.

FIGURE 4 is an enlarged fragmentary perspective view of the manner of stretching and connecting the wire fabric on the fence structure.

FIGURE 5 is an alternative connection to that disclosed in FIGURE 4.

FIGURE 6 is an enlarged fragmentary partly sectional elevation of a gate construction for the fence structure of the present invention.

FIGURE 7 is a section taken on the line 7-7 of FIGURE 6.

FIGURE 8 is a top plan view of a corner post showing transverse connecting elements fragmentarily and connected to the post.

FIGURE 9 is an enlarged fragmentary view of the top of a line post according to the present invention showing a fitting secured thereto for the purpose of driving the post during erection of the fence structure.

FIGURE 10 is a section taken on the line 10-10 of FIGURE 9; and

FIGURE 11 is an illustration of a fitting adapted to be placed on the flange of a corner post for driving purposes in the case where posts are driven into position.

Referring to the drawings, and first of all to FIGURE 1, the terminal and/or corner posts are indicated by the numeral 10 interconnected by the transverse tubular terminal elements 11 and tubular stringers 11a, supported intermediate of the terminal posts by the line posts 12. All of these elements are formed in substantially similar manner as simple utilitarian elements which do not require additional capping or connecting accessories for completion of the fence structure.

Referring to FIGURE 2, it will be noted that the corner and terminal posts 10 are formed as a tubular element, a portion of one end of which is flattened to close the tube and form the exteriorly projecting integral flange 13. These posts are formed also with suitable circumferentially spaced narrow slots 14 which may be up to four in number if necessary but usually two slots disposed at 90° to one another is sufficient.

The transverse terminal connecting members 11 are formed in a substantially similar manner, a portion thereof at and adjacent to one end thereof being flattened to provide the co-axial flange 15 receivable in a slot 14 of a terminal post 10. The line of juncture between the flange 15 and the tubular portion of the transverse connector is preferably disposed at an incline to the longitudinal axis of the connector as indicated at 16; and directly adjacent the free end of the flange on one side thereof a notch 17 is formed having diverging or flared side edges. The base 18 of the notch is designed to form the fulcrum point for this terminal element and the notch 17 is located in the flange 15 in such a manner that the distance between the base 18 of the notch and the opposed end corner 19 of the flange is slightly less than the radius of a circle centering at the base of the notch and passing through the upper edge of a slot 14 of a post 10 when the notch 17 of element 11 is straddling the lower edge of said slot 14. Accordingly, it will be apparent that the transverse terminal element 11 may be quickly and securely

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engaged with the terminal post 10 merely locating the notched edge of its flange adjacent the slot of such post, inclining the structural element 11 downwardly in relation to the vertical post 10 and hooking the notch 17 over the lower edge of such slot 14 so that by swinging the structural element 11 upwardly to horizontal position, the flange 15 will cleanly pass through the slot 14 and will be retained in such engagement against possible withdrawal so long as the structural member is maintained in a substantially horizontal position or upwardly inclined position in relation to this corner post. Moreover, due to the flaring of the side edges of notch 17 and due to the inclined line of juncture 16 between flange 15 and the tubular portion of element 11, this element may be swung to an upwardly inclining position, as shown in dotted lines in FIGURE 2, as to dispose such element in desired line for ultimate connection of the element by means of other elements to a terminal post disposed at a higher elevation. The connection to the other post is achieved by means of an intermediate stringer element or elements 11a and a second terminal element 11 required to span the distance in question. The second terminal element 11 connecting with a terminal post disposed at the higher elevation to that with which the initial connection is effected, requires the element 11 to be rotated to dispose the notch 17 upwardly and to engage the uppermost edge of a slot 14 as illustrated in FIGURE 3 so that the flanged and notched structure of the elements 11 may thus be reversed according to post elevation requirements in the erection of the fence structure.

The intermediate connecting elements preferably comprise the transverse tubular elements 11a having a reduced tubular terminal shank 20 which, as shown in FIGURE 2, may be telescoped into the open tubular end of an element 11 as to provide a neat and firm connection whereas final connection may be effected by a short connecting sleeve 21 (FIGURE 1). In result, therefore, the fence structure will only employ a minimum of independent union sleeves as compared to their prevalence in the prior art.

The intermediate line post 12, as shown in FIGURES 9 and 10, embodies a similar general construction, a portion thereof at and adjacent to one end being flattened to form the co-axial flange 22 of substantial length as to provide for the central orifice 23 of a size to receive therethrough the tubular portion of a transverse connecting element 11. Consequently, the line posts are likewise of simple unitary construction. These posts may be driven in position by means of a U-shaped bracket 24 having a central channel 25 adapted to receive the flange 22 of the post. This bracket includes a washer element 26 of a size to fit the orifice 23 of flange 22 so that by inserting the washer in this orifice and bolting the bracket 24 on flange 22 by means of bolt 27, the bracket provides a striking head which will permit driving of the post into position without damaging the flange or terminal end of the post. In this instance while it is preferred that the terminal or corner posts should be set in concrete, these posts by reason of their construction may also be driven into position where this is desired. This is accomplished by providing the bracket 28 of generally U-shaped form provided with a lower curved contour 29. The channel formed by this bracket receives the flange 13 of a terminal post while the lower curved contour 29 of the bracket will snugly fit the curved tubular closed end of the post, where as by reinforcing the bracket by means of the bolt 30 as to avoid spreading of the sections thereof, the post may be driven into position.

It will be apparent from the above description that erection of fence structure employing the elements of the present invention is a particularly simple operation. On the one hand, the terminal post 10 and line post 12 may be erected in position whereupon by the very simple means of connection, viz. the interengagement of notched flanges 15 of the transverse terminal elements 11 with

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the slots 14 in the posts and the slotting of intermediate stringer elements 11a through the line posts, the fence structure is quickly erected and any one line thereof completed when the final tubular sleeve 21 is in place, and which completely eliminates the additional steps normally required by prior art, including the securing of brackets on the terminal posts, the bolting of the brackets to transverse members, and the capping of the terminal posts and line posts.

The fencing fabric is very readily added to the fence structure thus comprised.

At one end of a line of fence structure the free end of the fabric has a rod passed through the terminal loops thereof similar to the manner illustrated in FIGURE 4, and by means of brackets, similar to bracket 31, FIGURE 4, such rods are anchored to the terminal post at that end of the line. At the opposite end of the line bracket 31 may be applied to the post which incorporates the special bolt member 32 formed with the reduced screw threaded end 33. The larger shank 34 of the bolt is formed with a transverse orifice 35 into which one end of an anchoring wire 36 is designed to be projected. The opposite end of this wire is secured to the rod 30a, thus by rotating the bolt 32 of each bracket 31, thus employed, the fencing fabric is readily stretched to meet requirements, whereupon the nut 37 is tightened as to anchor the fabric in taut condition on the fence structure. The fabric otherwise is secured to the top rail of the fence structure by means of suitable wire clips. Clamps 31 may be replaced to improve the appearance of the structure and simplify attachment, which is done preferably by employing, in lieu thereof, simple rigid wire connectors 38 having offset arms 39 and 40, the arm 39 being passed through a suitable small orifice 41 in a terminal post and the arm 40 being adapted to engage the loop of a clevis 42 which incorporates the special bolt 32 so that the fence fabric may be stretched and tightened in the same manner as previously described. Wires or small clamps connecting to a rod 30a and connectors 38 at the opposite end of the line may serve as the anchoring for the opposite end of the fabric.

Alternatively, connectors having a looped end to encircle a rod 30a and an offset arm to anchor a terminal, such as the connector 43 for the gate fabric illustrated in FIGURE 6, may be employed as a means of anchoring one end of the fabric in a line of the fence.

A simple gate for the fence structure is generally illustrated in FIGURE 6 and which may be formed from two or more tubular elements. The two forming the terminal ends of the gate are bent as at 44 and 45 by inversely upsetting the tube as to provide a reinforced corner where-in the wall of the tube on the inside of the bend is channelled inwardly, as at 46 (FIGURE 7), providing for right angular bends of reinforced character forming the convenient channel 46 which may be employed as an anchoring means for the terminal rod anchors of the fabric. The free ends of this bent tubular element may be formed with the reduced shanks 47, whereas the free ends of the complementary bent tubular element form sockets for the shanks 47. Of course, this latter element is made shorter where a small gate is in question and where a long gate is required longer than that providable by two bent sections, both of these may be formed with the shanks 47 and tubular extensions fitted thereto as to provide for the length required.

The channel 46 at the upper lower corners of the gate forms a particularly effective anchor for the terminal rods 48 carried at the ends of the fabric adapted to finish the gate. In this instance, the channel 46 slopes downwardly as it merges and terminates with the top rail of the gate and slopes upwardly as it merges with and terminates in the lower rail of the gate. This, therefore, provides a natural socket for receiving the ends of the rods 48, which may be pulled and/or levered into position, as shown in FIGURE 6, to stretch the fabric on the gate to a

UPPER DOWN

Correct use  
of term  
"rotated"= Turn about  
Axis. NOT  
what  
Examiner  
says.Also, could  
not "rotate"  
within slot

14 -- must

be done  
before  
insertion.Totally  
different!

8,021,116

5

sufficient degree, the bar being anchored intermediate to the top and bottom rails of the gate by means of the connectors 43 which loop around the rods 48 and/or anchored in the vertical tubes of the gate, one at each end.

What I claim as my invention is:

1. A fence comprising a post and a rail, said post having a substantially vertical slot, said rail having a flat terminal portion of a thickness slightly less than the lateral dimension of said slot, said terminal portion having a notch in one edge adjacent to the end thereof, the distance from the bottom of said notch to the opposite edge of the terminal portion being substantially the vertical dimension of said slot, whereby said terminal portion may be placed in said slot with said notch in engagement with the lower or upper edge of said slot, and when the rail is swung about said notch as a pivot said terminal portion will be locked in said post, said rail comprising at least two sections in separable telescoping engagement with each other.

2. A fence post and rail structure as claimed in claim 1, in which said rail is tubular and its terminal portion comprises a flattened end portion thereof, the tubular nature of said rail affording said separable telescoping engagement for the sections thereof.

3. A fence post and rail structure as claimed in claim 1, in which the opposed edges of said notch are divergent outwardly toward said one edge, whereby to accommodate swinging movement of said rail relative to said post after locking of said terminal portion thereof in said post, to thereby accommodate the angle between the post and rail to adjacent sloping ground contour.

4. Sectional fence structure comprising in combination

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two end posts, at least one line post, and a rail element comprising at least two sections in separable telescoping engagement with each other and extending between said end posts and having separably engaging connections with said posts to provide a line of fence, said separably engaging connections between the rail and posts each including a substantially vertical slot in each end post and a complementary flat terminal portion at each end of the rail of a thickness slightly less than the lateral dimension of the complementary post slot, said terminal portions each having a notch in one edge adjacent to the end thereof, the distance from the bottoms of the respective notches to the opposite edges of the respective terminal portions being substantially the vertical dimension of the slot of the complementary post, whereby said terminal portions may be placed in the said post slots with their notches in engagement with the upper or lower edges of said slots, and when said terminal portions are swung about said notches as pivots said terminal portions will be locked in said posts, and said line post being apertured for through passage and support of said rail element.

#### References Cited in the file of this patent

##### UNITED STATES PATENTS

336,634	Gage	Feb. 23, 1886
656,390	Condon	Aug. 21, 1900
2,199,518	Coleman	May 7, 1940

##### FOREIGN PATENTS

734,057	Great Britain	July 20, 1955
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